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EXAMINER

BOMAR, THOMAS S

ART UNIT

PAPER NUMBER

3672

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/725,124

Applicant(s)

BAILEY ET AL.

Examiner

Shane Bomar

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-30 and 46-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 53-55 is/are allowed.
- 6) ☒ Claim(s) 22-30, 46-52 and 56-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 52 is objected to because of the following informalities: the recitation of “the impact force” lacks proper antecedent basis. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 56-57 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 4,646,830 to Templeton.

Regarding claim 56, Templeton discloses a method for delivering an impact force to a tubular string (see col. 1, lines 43-45), comprising: providing a tubular string 19 comprising a jar 18, wherein the jar comprises a signal conducting path 74 and a fluid flow path from port 70 to port 72 therethrough, and the signal conducting path 74 is isolated from the fluid flow path (see Figs. 1 and 6); and pulling or pushing on the string from a rig 16, thereby operating the jar to deliver the impact force (see col. 4, lines 36-52 and col. 5, lines 24-62).

Regarding claim 57, the signal path 74 is isolated from any flow path through the jar (see Fig. 6).

Art Unit: 3672

4. Claims 56 and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6,481,495 to Evans.

Regarding claim 56, Evans discloses an inherent method for delivering an impact force to a tubular string, comprising: providing a tubular string comprising a jar 10'' (see col. 4, lines 26-28), wherein the jar comprises a signal conducting path 360 and a fluid flow path therethrough the interior of mandrel 12, and the signal conducting path 74 is isolated from the fluid flow path (see Figs. 11A-D); and pulling or pushing on the string from an inherent rig, thereby operating the jar to deliver the impact force (see col. 13, line 20 through col. 14, line 42). The signal conducting path is seen to be isolated from the flow path because the conductor of the signal is protected by jackets 372 and 386 (see col. 13, lines 37-62).

Regarding claim 58, the jar further comprises an axially displaceable electrical coupling 388 (see Fig. 11D), wherein 360 and 388 as a whole are seen as an electrical coupling between the tools above and below the telescoping jar 10''.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

Art Unit: 3672

made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 46, 51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Templeton in view of Evans.

Templeton teaches an inherent method for communicating with a downhole device comprising positioning a tubular string 17 in a wellbore (see col. 6, lines 22-25). The tubular string includes an axially extendable signal conducting tool 18 having a flow path therethrough the interior of mandrel 12 (see Figs. 11A-D and col. 4, lines 36-42), wherein the signal conducting tool is located between a downhole device 20 and an upper end of the tubular string 17 (see Fig. 1 and col. 6, lines 22-24). However, it is not explicitly taught that the string includes a signal transducing downhole device or that the method also includes sending a signal between the downhole device and a location above the tool, the signal traversing a path through the tool wherein the signal path is physically separated from the fluid flow path.

Evans teaches a tubular string and an axially extendable signal conducting tool 10'' similar to that of Templeton. It is further taught that the tubular string includes a signal transducing downhole device, such as the MWD devices that are notoriously known in the art (see col. 10, lines 37-41), wherein the signal from the downhole device would be sent above the signal conducting tool 10'' through signal path 360. It would have been obvious to one of ordinary skill in the art, having the teachings of Templeton

Art Unit: 3672

and Evans before him at the time the invention was made, to modify the tubular string taught by Templeton to include the signal transducing device of Evans, in order to obtain a signal path that is physically separated from any flow path in order to protect the signal conductors from harmful wellbore fluids. One would have been motivated to make such a combination since Templeton has left the invention open for the use of any known electrical conductor or the like to be used in the isolated conductor path, and since Evans has left the invention open for any known downhole tool to be connected to the end of the electrical conductor. Therefore, anyone attempting to solve the narrow problem of conducting signals from a downhole device uphole through an axially extendable signal conducting tool would consult these references and apply their teachings together.

Regarding claim 51, the combination applied to claim 46 above teaches that the axially extendable conducting tool further comprises an axially displaceable electrical coupling 388 (see Fig. 11D of Evans), wherein 360 and 388 as a whole are seen as an electrical coupling between the tools above and below the telescoping jar 10''.

Regarding claim 52, as best understood, the combination applied to claim 46 further teaches that the method also includes pulling or pushing on the string from a rig 16, thereby operating the jar to deliver an impact force (see col. 4, lines 36-52 and col. 5, lines 24-62 of Templeton).

8. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Templeton in view of Evans as applied to claim 46 above, and further in view of US patent 4,416,494 to Watkins et al.

The combination applied to claim 46 teaches the method that includes sending a signal through the signal conducting tool. It is not taught that the signal is transmitted

Art Unit: 3672

from a sensor, or that the sensor measures temperature, pressure, or chemical characteristics of a fluid around a bit.

Watkins et al teach a method for sending signals similar to that of the combination. It is further taught that at least one sensor is located adjacent a bit that measures temperature, pressure, and chemical characteristics of a fluid around the bit (see Fig. 1 and col. 5, lines 36-48). It would have been obvious to one of ordinary skill in the art, having the teachings of the combination and Watkins et al before him at the time the invention was made, to modify the downhole device taught by the combination to include the sensor instrument of Watkins et al, in order to obtain measurements of subsurface conditions or parameters. One would have been motivated to make such a combination since Watkins et al has shown that it was notoriously known in the drilling art to sense downhole parameters adjacent the bit and transmitting the data uphole via electrical power, and since the combination has shown that data obtained from a downhole device can be sent uphole through the electrical conductor.

9. Claims 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Templeton in view of Evans as applied to claim 46 above, and further in view of US patent 4,899,834 to Weldon.

The combination applied to claim 46 above teaches the method that includes a downhole device inherently actuated by an electrical transmission from the surface. It is not taught that the device is a drilling hammer or a vibrator.

Weldon teaches a method for communicating with a downhole device similar to that of the combination. It is further taught that the downhole device is a drilling hammer and a vibrator (see col. 3, lines 3-5 and col. 4, lines 1-7). It would have been obvious to

Art Unit: 3672

one of ordinary skill in the art, having the teachings of the combination and Weldon before him at the time the invention was made, to modify the downhole device taught by the combination to include the drilling hammer and/or vibrator of Weldon, in order to obtain a device that can penetrate very hard formations (see col. 1, lines 40-45 of Weldon). One would have been motivated to make such a since Weldon has shown it to be notoriously known in the art to use a drilling hammer and/or vibrator downhole to assist in drilling hard formations.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Templeton in view of Evans as applied to claim 46 above, and further in view of US patent 6,296,066 to Terry et al.

The combination applied to claim 46 above teaches the method wherein a downhole device is included. It is not expressly taught that the device is a stabilizer.

Terry et al teach a method for sending signals similar to that of the combination. It is further taught that a downhole device for the controlled drilling can be a stabilizer (see col. 17, lines 13-30). It would have been obvious to one of ordinary skill in the art, having the teachings of the combination and Terry et al before him at the time the invention was made, to modify the method taught by the combination to include the downhole stabilizer of Terry et al, in order to obtain a string that can be propelled and steered in any direction more effectively. One would have been motivated to make such a combination since Terry et al have shown that it was notoriously known in the art of drilling control to use stabilizers as downhole devices for such control.



Art Unit: 3672

11. Claims 26, 29, 47, 48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Templeton in view of Evans as applied to claim 46 above, and further in view of US patent 5,316,094 to Pringle.

The combination applied to claim 46 above teaches the method that includes a signal path and a downhole device. However, it is not expressly taught that the signal path includes a wall of the conducting tool, that the downhole device is a drill bit, that the downhole device is a rotatable steering apparatus, or that the downhole device is a thruster.

Pringle teaches a method for sending signals similar to that of the combination. It is further taught that the signal path includes a wall of the signal conducting tool 108 (see Figs. 1I-1K), and that the downhole device is either a drill bit (see col. 2, lines 44-50 and col. 5, lines 49-52), a rotatable steering apparatus, and/or a thruster, that is actuated by an electrical transmission from the surface (see col. 1, lines 19-23, col. 2, lines 3-16, col. 2, lines 44-68, and col. 3, line 65 through col. 4, line 2). It would have been obvious to one of ordinary skill in the art, having the teachings of the combination and Pringle before him at the time the invention was made, to modify the method taught by the combination to include the aforementioned teachings of Pringle, in order to obtain flexible storage for a downhole electrical conductor. One would have been motivated to make such a combination since the combination is open to the use of any type of downhole tool known in the art, and since the extendable mandrel of the combination is very similar to the extendable mandrel 16 of Pringle, Pringle has shown it to be notoriously known in the art that these types of extendable devices can have signal paths through the wall of the conducting tool.

Art Unit: 3672

12. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Templeton in view of Evans and Pringle as applied to claim 47 above, and further in view of US patent 4,899,834 to Weldon.

The combination applied to claim 47 above teaches the method that includes a downhole device actuated by an electrical transmission from the surface. It is not taught that the device is a vibrator.

Weldon teaches a method for communicating with a downhole device similar to that of the combination. It is further taught that the downhole device is a vibrator (see col. 3, lines 3-5 and col. 4, lines 1-7). It would have been obvious to one of ordinary skill in the art, having the teachings of the combination and Weldon before him at the time the invention was made, to modify the downhole device taught by the combination to include the vibrator of Weldon, in order to obtain a device that can penetrate very hard formations (see col. 1, lines 40-45 of Weldon). One would have been motivated to make such a since Weldon has shown it to be notoriously known in the art to use a vibrator downhole to assist in drilling hard formations.

***Allowable Subject Matter***

13. Claims 53-55 are allowed.

***Response to Arguments***

14. Applicant's arguments with respect to claim 46 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3672

*Conclusion*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hall et al, Taylor, and Zeller teach jars and/or conductors of particular interest.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David J. Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

tsb   
September 12, 2005